

A NEW SPECIES OF *TWEEDIA* (ASCLEPIADACEAE) FROM THE NORTH OF CHILE

UNA NUEVA ESPECIE DE *TWEEDIA* (ASCLEPIADACEAE) DEL NORTE DE CHILE

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ABSTRACT

Tweedia stipitata Rua et Liede, a new Chilean species from the province of Coquimbo, is described and illustrated. It differs from all others species in the genus by its stipitate gynostegium and its small, inconspicuous stylar head. Its intermediate position between *Tweedia* and *Amblystigma* is discussed.

KEYWORDS: Asclepiadaceae, *Tweedia*, Chile.

RESUMEN

Tweedia stipitata Rua et Liede, una nueva especie chilena proveniente de la provincia de Coquimbo, es descrita e ilustrada. Difiere de las demás especies del género por poseer el ginostegio notablemente estipitado y el apéndice estigmático pequeño, inconspicuo. Se discute su posición intermedia entre *Tweedia* y el género afín *Amblystigma*.

PALABRAS CLAVES: Asclepiadaceae, *Tweedia*, Chile.

INTRODUCTION

In the collections of *Tweedia* Hook. et Arnott in the herbarium of Concepción, Chile, a group of specimens from Coquimbo was found which had been identified as *T. confertiflora* (Decne.) Malme. These specimens do not match any of the hitherto known species of the genus.

Tweedia stipitata Rua et Liede *sp. nov.*
(Fig. 1)

Herba perennis, volubilis. Folia hastata vel sagittata. Inflorescentiae 6-8-floribus, longe pedunculatae, globosae. Corollae tubus brevis et

lobi patentes, tortuli. Coronae squamae tubo corollae fere usque ad faucem adnatae, inter sese liberae; parte libera anguste oblonga, apice bifido. Gynostegium longe stipitatum; caput gynostegii parvum et inconspicuum. Folliculi puberuli.

HOLOTYPE: CHILE. Prov. Coquimbo: Dpto. Ovalle: quebrada al norte de Fray Jorge, F. Behn s.n., 22-10-1965, "enredadera de hasta 3 m de alt." (CONC 30945).

Twining or scandent perennial herbs, woody toward base, glabrous to pubescent, especially at the buds and the young parts. Leaves opposite; leaf blades to 65 mm long, linear, with two distinct basal auricles and a more or less distinct sinus in-between, resulting in a hastate or sagittate shape; marginally revolute; covered with appressed hairs, more densely on the abaxial side; peduncles to 15 mm long, pubescent. Inflorescences 6-8 flowered, globose to semiglobose; peduncles 8-15 mm long, pedicels 2-5 mm long, tomentose; bracts and bracteoles linear, tomentose, to 10 mm long. Calyx lobes 8,3-9,3 mm long,

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linear, abaxially tomentose, adaxially glabrous, with collectors in the sinuses. Corolla with a tube of 5.0-6.1 mm long, abaxially puberulous; lobes 9.1-11.6 mm long, 1.7-2.2 mm wide at the base, reflexed; abaxially puberulous, adaxially glabrous. Corona corolline, fused to the corolla tube for about half of its height, consisting of free lobes 4.6-5.0 mm long and 1.2-1.7 mm wide, narrowly oblong, apically divided in two rounded lobules. Gynostegium stipitate, stipe 4.2-5.1 mm long; anthers 1.0-2.0 mm long, anther appendages narrowly triangular-ovoid, 0.80-0.88 mm long, 0.76-0.80 mm wide; corpusculum elliptical, 0.46-0.50 mm long, 0.18-0.22 mm wide, with rounded apex and more or less attenuate base; caudicles slightly declinate, 0.16-0.26 mm long, with thickened distal part; pollinia straight, 0.50-0.58 mm long, 0.18-0.20 diam. Ovary 1.4-1.9 mm long; styles 5.31-5.81 mm long, free over 47-60% of their length; stylar head 0.48-0.83 mm high, appendix of stylar head 0.5-0.8 mm high, blunt. Follicles to 80 mm long, apically acuminate, puberulous. Seeds 5.8-6.6 mm long, flat, verrucose, with a coma of silky hairs at the distal end.

Flowering time: September to December

ADDITIONAL MATERIAL EXAMINED:

CHILE. Prov. Coquimbo: Alrededores del bosque de Fray Jorge, GARAVENTA 5730, 19-10-1963 (CONC 65020); Bosque Fray Jorge, MUÑOZ s.n. (Herb. Gunckel 51520), sept.1972 (CONC 64984); Carretera Panamericana, entre Pichidangui y Los Vilos, MARTICORENA & MATTHEI 91, 12-10-1963 (CONC 28103); Carretera Panamericana, 20 km al sur de Los Vilos, RICARDI & MARTICORENA 4238/623, 14-9-1957 (CONC 24784); Los Vilos, ± 20 m s.m., MONTERO 7236, 8-10-1965 (CONC 65008); Fray Jorge, BEHN s.n., 30-10-1963 (CONC 28588); Pichidangui, en la calle, ± 20 m s.m., MONTERO 12289, 8-9-1982 (CONC 65002); Quebrada al norte de Fray Jorge, BEHN s.n., 30-10-1963 (CONC 28590); Totoralillo, Los Vilos, PFISTER s.n., 11-9-1948 (CONC 8264); Dpto. Elqui, Rivadavia, BEHN s.n., 23-10-1965 (CONC 30947); Dpto. Illapel: Carretera Panamericana, 7 km al norte de Los Vilos, MARTICORENA *et al.* 1374, 16-10-1971 (CONC 38466);

Dpto. Illapel: Carretera Panamericana, frente a Punta Lautaro, 140 m s.m., 31°29'S, 71°34'W, MARTICORENA *et al.* 239 (CONC 43075); Dpto. Illapel: Caleta Oscuro, 5 a 50 m s.m., 31°25'S, 71°35'W, MARTICORENA *et al.* 298, 2-9-1974 (CONC 43073); Dpto. Ovalle: Quebrada Tentiente, RICARDI 2073, 19-9-1952 (CONC 12728).

DISCUSSION

This species occupies a position intermediate between the genera *Amblystigma* Benth. and *Tweedia* Hook. & Arn. Both genera belong to the exclusively South American *Oxypetalum*-alliance (Malme 1904, Liede unpubl.) within the tribe Asclepiadeae. With *Amblystigma*, the species shares the common character of a flat, inconspicuous stylar head and the certainly synapomorphic character of a highly stipitate gynostegium. With *Tweedia*, it shares the presence of a corolline corona, the distinctly basitonically branched low-growing habit and the very narrow, often sagittate leaves. As corona characters are classically used to delimit the genera of the *Asclepiadaceae*, the new species is preliminarily placed into the genus *Tweedia*. However, its existence accentuates the close relationships between *Tweedia* and *Amblystigma*.

In the Catalog of the Vascular Flora of Chile (Marticorena & Quezada 1985) four species of *Tweedia* are mentioned. Lately, they were reduced to just two (Rua 1989). *Tweedia stipitata* is closely nearly related to *T. birostrata* (Hook. & Arn.) Hook. & Arn., and resembles most the specimens of this widespread species collected in the province of Coquimbo. These specimens possess very narrow leaves and multiflowered, longly pedunculate inflorescences (Rua 1989). *T. stipitata* differs, however, from this *T. birostrata*, as from all other species of *Tweedia*, by its stipitate gynostegium and its small, inconspicuous stylar head.

T. stipitata is found at the northernmost limit of the distribution area of the genus *Tweedia* and is sympatric with *T. birostrata*. The genus *Amblystigma*, in contrast, is not found west of the Andes.

KEY TO THE CHILEAN SPECIES OF *TWEEDIA*

- A. Corona lobes adaxially with a protuberance. Corolla lobes adaxially barbate at the base. Leaves trullate or hastate, the upper ones linear, base of the lamina attenuate.....*T. andina*
- A'. Corona lobes flat, with a conspicuously bifid apex. Corolla lobes adaxially glabrous. Leaves sagittate or hastate, base of the lamina sinuate.
- B. Gynostegium subsessile, stylar head with well developed apex.....*T. birostrata*
- B'. Gynostegium conspicuously stipitate, stylar head short inconspicuous.....*T. stipitata*

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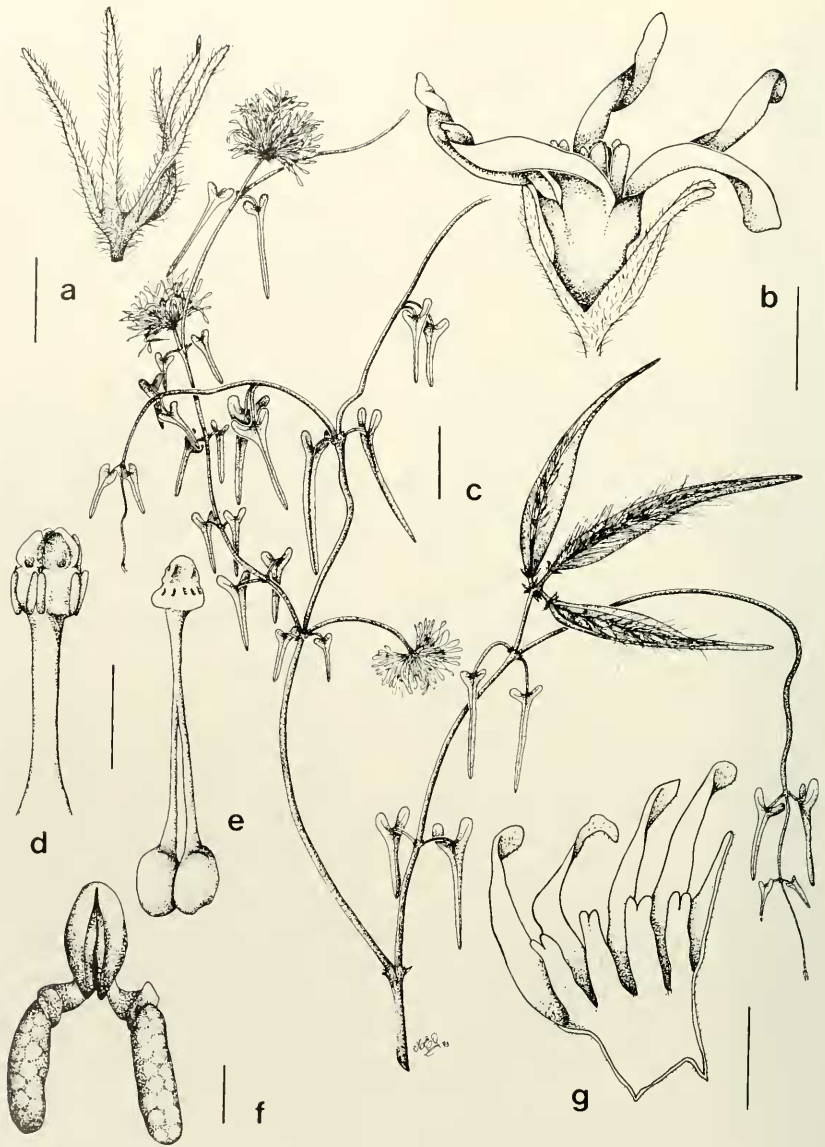


FIG. 1. *Tweedia stipitata* Rua et Liede (from CONC 30945, holotypus speciei): a, calyx; b, flower; c, stem with inflorescences and follicles; d, gynostegium; e, gynoecium, the stamens covering the stigmatic zone were removed; f, translator; g, portion of the corolla with corresponding corona. (Scale: a: 2 mm; b and g: 5 mm; c: 20 mm; d and e: 1 mm; f: 0.2 mm). Del. María E. Gallego.